



REMARKS

Claims 1-3, 5, 6, 15, 16, and 23-29 are pending in this application by way of the present amendment. In this amendment, claims 1 and 15 have been amended, claim 4 cancelled, and claims 23-29 added. No new matter has been added.

112, 2nd Paragraph, Rejections

Claims 1-6, 15, and 16 were rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite. In particular, the Examiner queries whether the fibers only remain hydrophilic at a temperature above 35°C.

Claims 1-6 describe a hydrophilic polyester fiber which includes a dispersion that, when heated to 35°C or higher, adheres to the fiber and precipitates a block copolymer on the fiber surface, making the fiber hydrophilic. It would be clear to one of ordinary skill in the art that the coating of the fiber is an irreversible process. Therefore, the coated fiber would retain its hydrophilicity below 35°C.

Similar arguments may be made regarding Claims 15 and 16. Hence, the rejections are believed to have been overcome.

102(b) Rejections

Claims 1-5, 15, and 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Wada (U.S. Patent No. 4,027,346). The Office Action asserts that Wada teaches the hydrophilic polyester fibers of Claims 1-5 and the method of Claims 15 and 16 for producing the fibers including coating them with an aqueous dispersion and heating them to above an aggregation temperature.

Ordinarily, when an anionic surfactant and a cationic surfactant are mixed, they precipitate an ion complex. However, according to the claimed invention, when a prescribed amount of a nonionic surfactant and/or an amphoteric surfactant is added to at least one of an anionic surfactant and a cationic surfactant before they are mixed, even if both are mixed, the dispersion is stable in a temperature region of lower than 35°C and does not produce an ion complex, keeping the dispersion state. As such, the dispersion state is broken by heating to 35°C or higher, such that an ion complex is produced and, at the same time, a polyester-polyether block copolymer is precipitated. The produced ion

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complex and polyester-polyether block copolymer are precipitated on a polyester fiber and firmly adhere to the fiber to give a hydrophilic polyester fiber excellent in durability. A hydrophilic polyester fiber according to the claimed invention has high durability of hydrophilicity, as compared with those produced by conventional methods, and is capable of retaining the hydrophilicity even in the case of entangling treatment by high pressure water current or immersion in water or an aqueous solution for a long duration.

In contrast, Wada does not teach or suggest the hydrophilic polyester fiber of Claim 1. Instead, Wada discloses a method for modifying polyester type synthetic fiber products, which includes adding a surface active agent (an anion surface active agent, a nonion surface active agent) which, unlike the present invention, is used as a dispersion-stabilizing agent and has a function of inhibiting block copolymers from aggregation to fibers.

Moreover, Wada describes adding an acid and/or a water-soluble salt as a dispersion-breaking agent and setting the dispersion-breaking and aggregation-initiating temperature to be 65 to 125°C. Whereas, the aqueous mixed dispersion of Claim 1 is the dispersion-breaking agent, produces an ion complex, and has a dispersion-breaking and aggregation-initiating temperature as low as 35°C.

Furthermore, Wada describes dipping fiber products in a treating liquor containing the surface active agent and having such a characteristic to increase the affinity and sorption power of block copolymers to the fiber products by heating at a temperature higher than the aggregation-initiating temperature. Wada purports to simultaneously carry out fiber dying or the like. This purpose is different from that of the claimed embodiments of the present invention.

Therefore, Wada fails to teach or suggest the hydrophilic polyester fiber of Claim 1, including the components of the dispersion, the ion complex production, the dispersion-breaking temperature, and the temperature at which hydrophilicity is made, for example. Nor is there any suggestion in Wada to modify its teachings to produce the claimed invention.

Accordingly, Claim 1 and dependent Claims 2-5 are believed to patentably distinguish over Wada. Claim 15 recites similar language to Claim 1. Thus, Claim 15

and dependent Claim 16 are believed to patentably distinguish over Wada for at least the same reasons as Claim 1.

103(a) Rejection

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wada in view of Suzuki (U.S. Patent No. 5,262,460). Specifically, the Examiner asserts that Wada teaches the elements of independent Claim 1 and Suzuki teaches the fiber of Claim 6 with two kinds of polyester in a sheathed type.

On the contrary, the deficiencies of Wada are not corrected by Suzuki, since Suzuki also fails to teach or suggest the hydrophilic polyester fiber as in Claim 1. Hence, Claim 1 and dependent Claim 6 are believed to patentably distinguish over Wada, Suzuki, and the combination thereof.



CONCLUSION

Applicants submit that the claims as presently written are allowable and an early and favorable action to that effect is respectfully requested.

The Examiner is invited to contact the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,

Date: 3/3/03

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